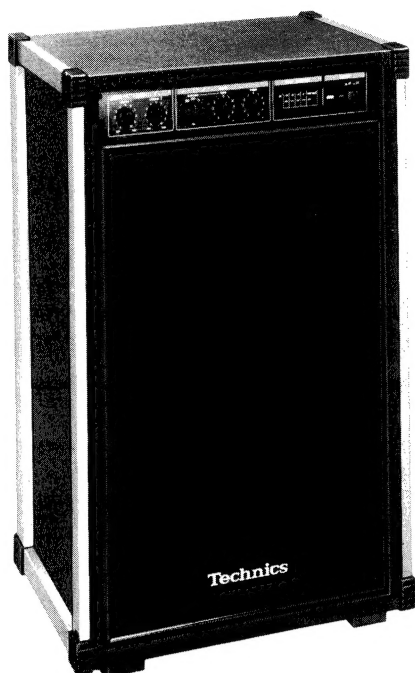


Service Manual

TONE CABINET

SY-T60

(EN), (ES), (ED), (EI), (EH), (EB), (EF),
(EG), (EW), (EL), (EP), (MC), (XT),
(EK), (XL), (XR), (XS), (X), (XX), (XV)



AREAS

(EN): Norway	(EK): the United Kingdom
(ES): Sweden	(MC): Canada
(ED): Denmark	(XT): Taiwan
(EI): Italy	(XL): New Zealand
(EH): Holland	(XR): Australia
(EB): Belgium	(XS): Malaysia, Singapore, South Africa
(EF): France	(X): the Middle Near East, Hong Kong, the Philippines, Indonesia
(EG): Germany, Austria	(XV): Venezuela, Ecuador, Panama
(EW): Switzerland	(XX): Peru, Chile
(EL): Finland	
(EP): Spain	

Specifications

Speakers:	30 cm (11-13/16")×1, 16 cm (6-5/16")×1, 5 cm (1-31/32")×1
Output:	150W (RMS)
Input:	1: pin jack, large jack, volume control 2: pin jack, large jack, volume control
Tone controls:	treble, bass, bass-turnover
Load indicator:	green (−15, −8, −3, 0dB), red (overload)
Others:	power switch, power indicator
Power requirement:	400W, 350VA (Canada) AC 120/220/240V 50/60Hz AC 120V 60Hz—North America
Cabinet (W×H×D):	45 cm (17-23/32")×65 cm (25-19/32")×33.7 cm (13-9/32")
Net weight:	36.4 kg (80.2 lbs.)
Accessories:	pin-type cord×2, AC cord

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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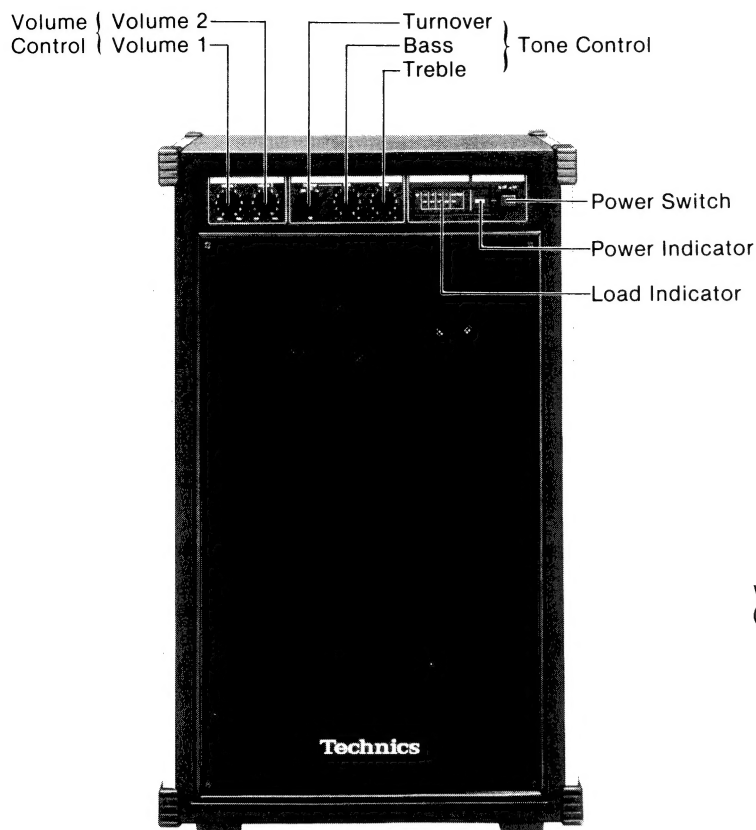
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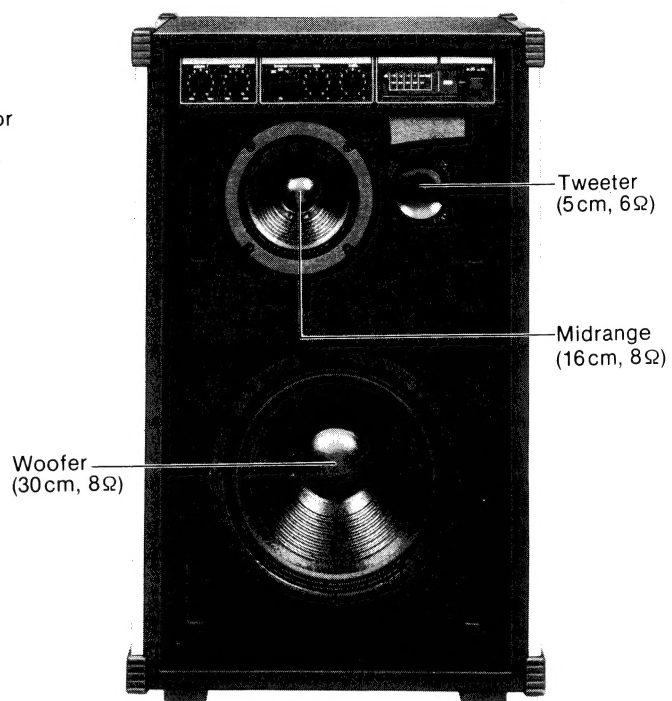
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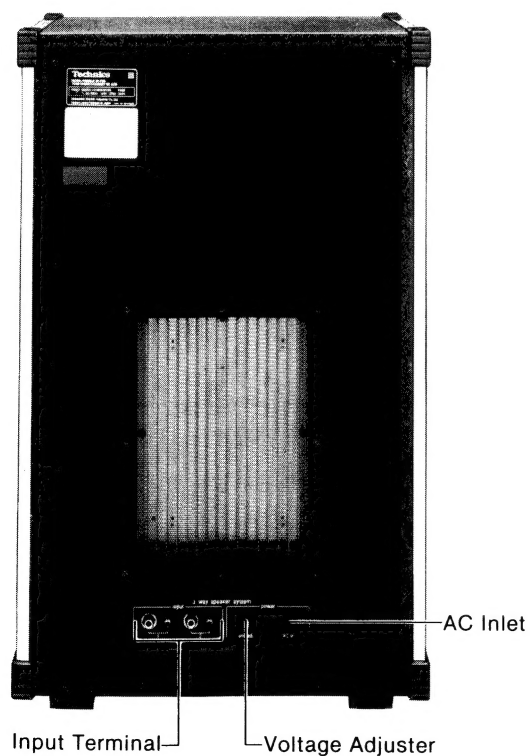
LOCATION OF CONTROLS



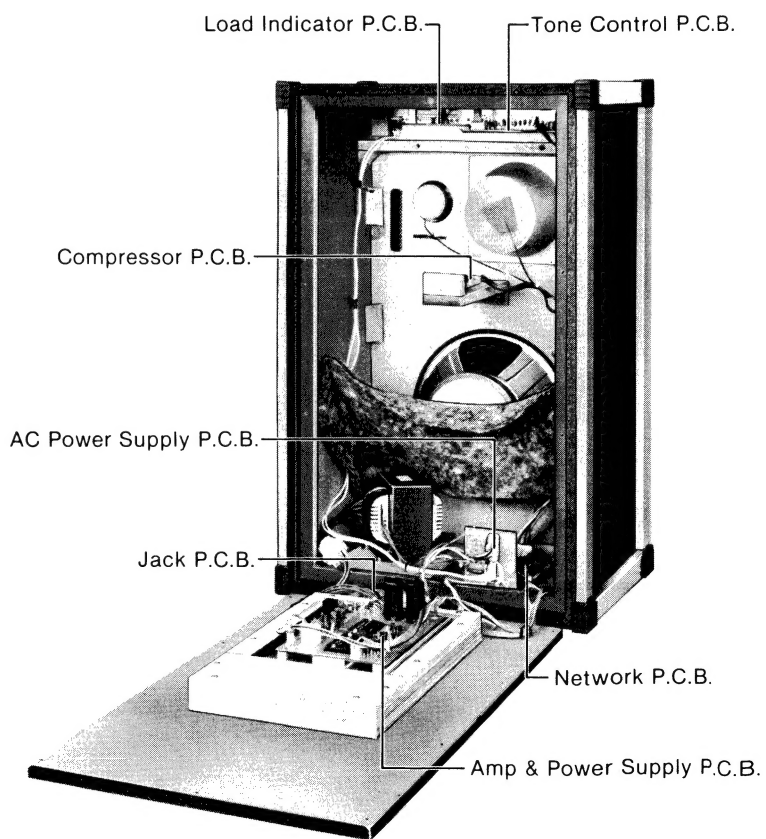
[Photo-1]



[Photo-2]



[Photo-3]



[Photo-4]

DISASSEMBLY INSTRUCTIONS

1. Speaker Gurille (Fig. 1)

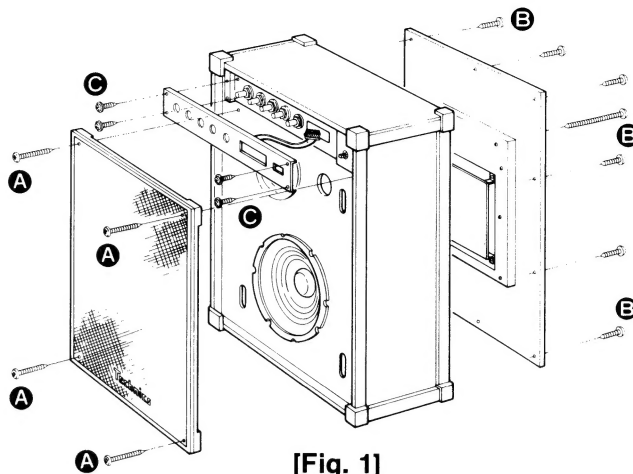
- Remove the 4 setscrews **A** which fasten the speaker gurille.
- The speaker gurille can be removed.

2. Rear Board (Fig. 1)

- Remove the 11 setscrews **B** located on the rear board.
- Then the rear board can be removed.

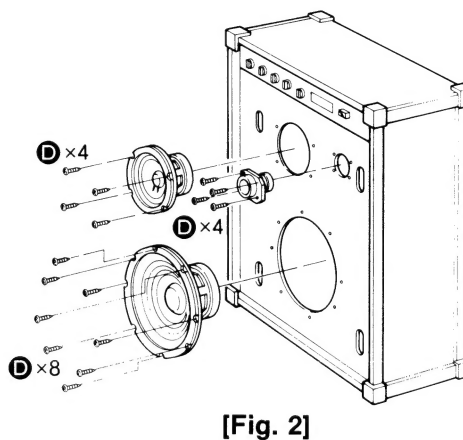
3. Control Panel (Fig. 1)

- Pull out the all knobs located on the control panel.
- Remove the 4 setscrews **C** which fasten the control panel.
- Then the control panel can be removed.



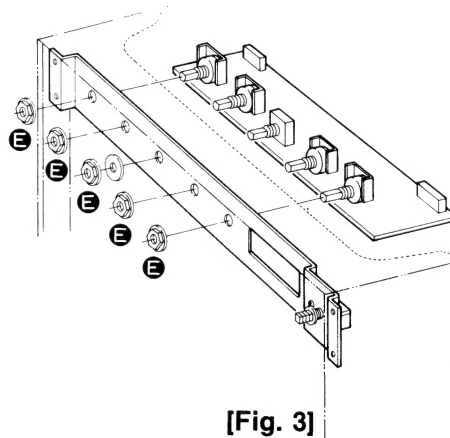
4. Speakers (Fig. 2)

- Remove the speaker gurille according to step 1.
- Remove the 8 setscrews **D** which fasten the woofer (30cm), and pull out the pin connector of speaker terminal. (Midrange 16cm, Tweeter 5cm.....4 setscrews **D**)
- Then the each speakers can be removed.



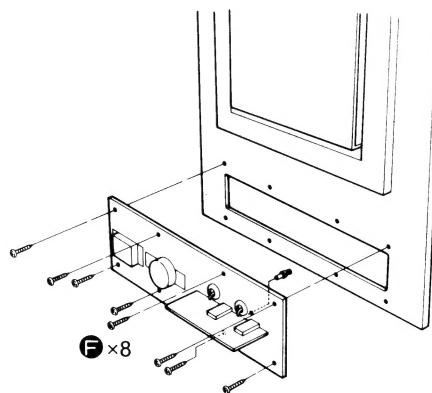
5. Tone Control P.C.B. (Fig. 3)

- Remove both rear board and control panel according to steps 2 and 3.
- Remove the 5 nuts **E** which fasten the each volumes, and pull out the tone control P.C.B. to rear side.
- Then the tone control P.C.B. can be removed.



6. Jack Panel (Fig. 4)

- Remove the rear board according to step 2.
- Remove the 8 setscrews **F** which fasten the jack panel.
- Then the jack panel can be removed.



1 2 3 4 5 6 7 8 9 10

1

2

3

4

5

6

7

8

9

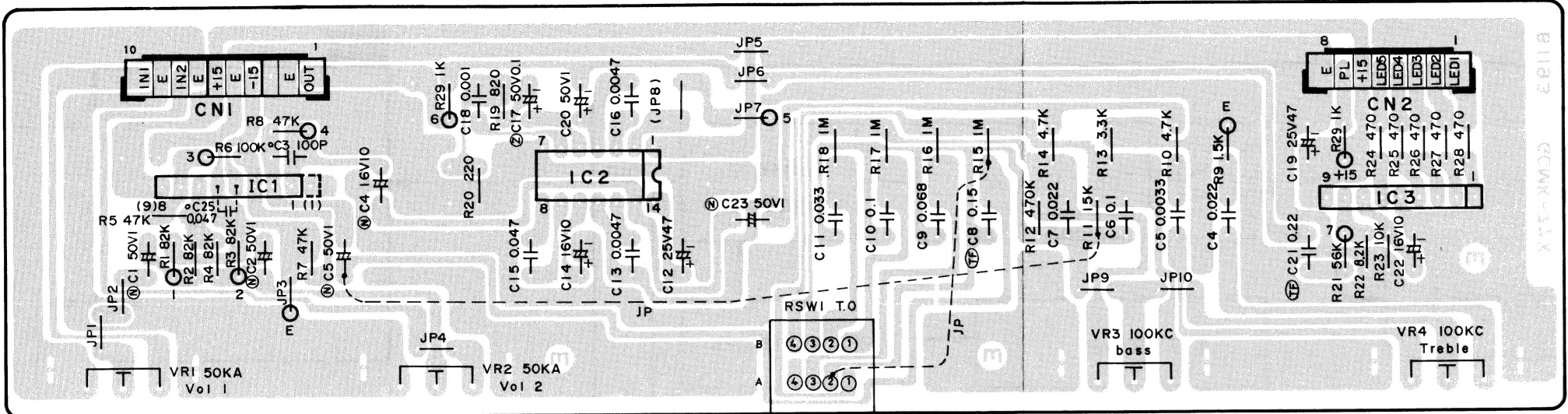
10

TONER CONTROL CIRCUIT BOARD (TC)

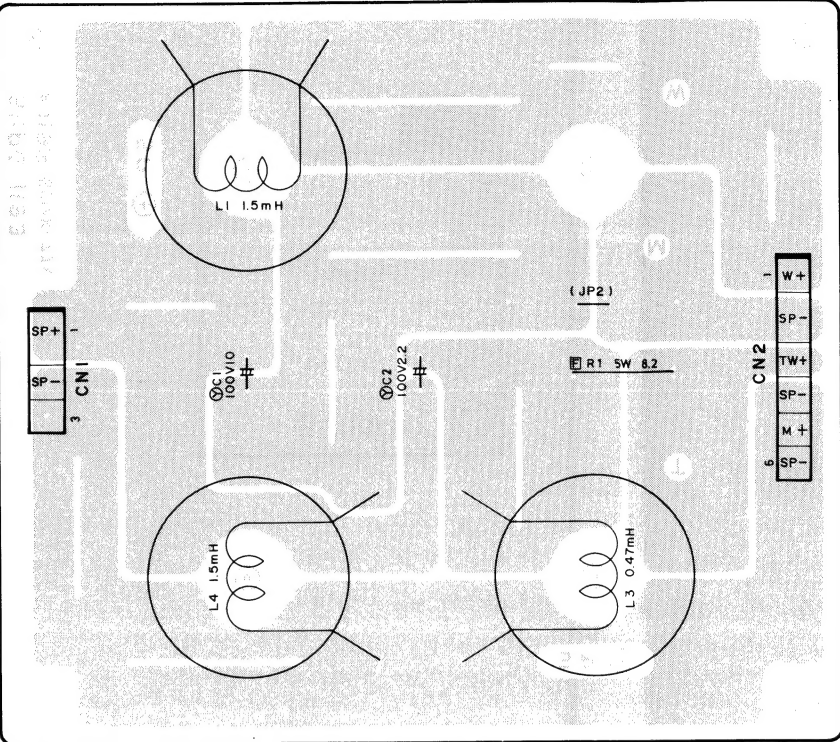
NETWORK CIRCUIT (NW)

SXPGB11931

SXPGA11931



NOTES:
• IC'S
IC1: SVIGM5218L
IC2: SVIGLM1894N
IC3: SVIGBA6124



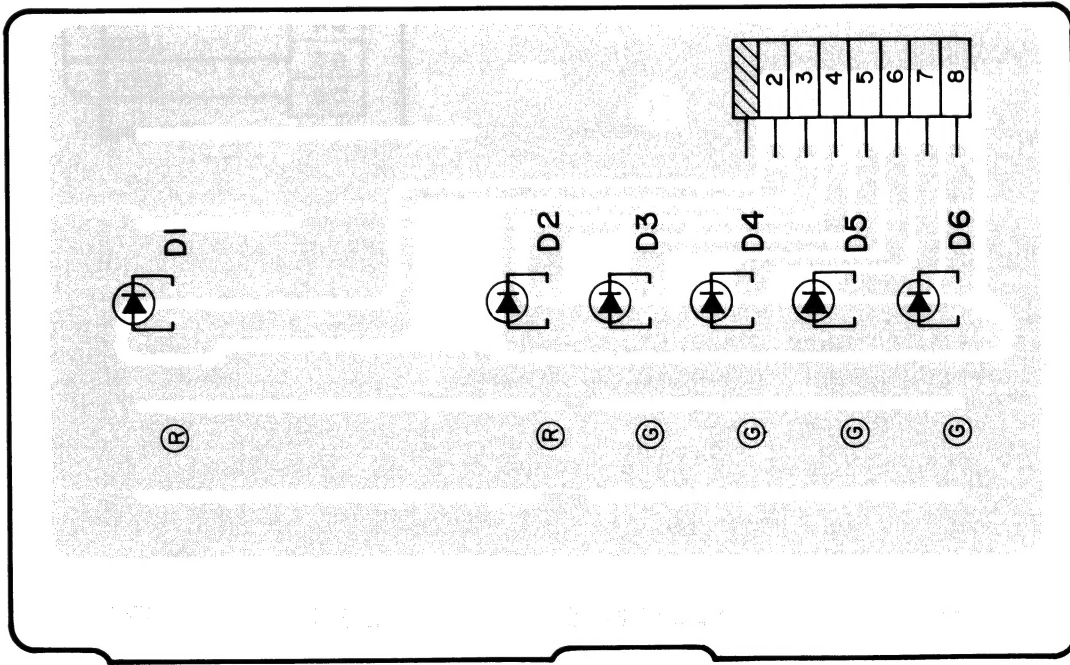
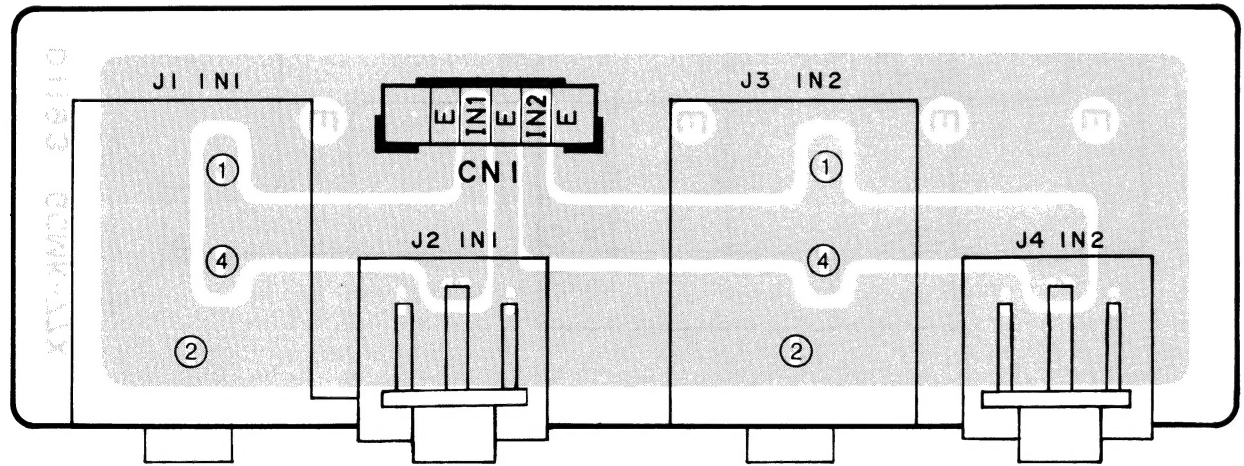
JACK CIRCUIT BOARD (JACK)

LOAD INDICATOR CIRCUIT BOARD (LI)

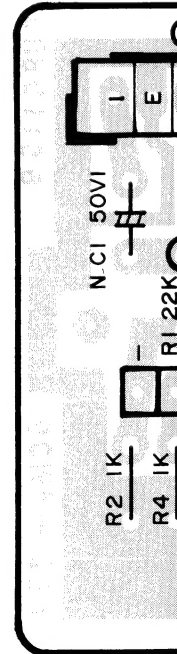
COMPRESSOR

SXPGD11931

SXPGC11931

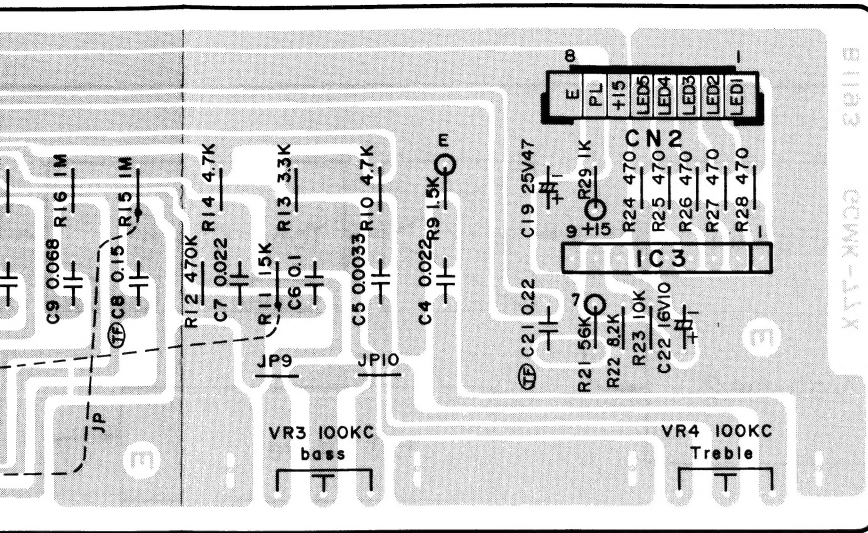


NOTES:
• DIODES
D1, 2: LN846RP
D3~6: LN346GP

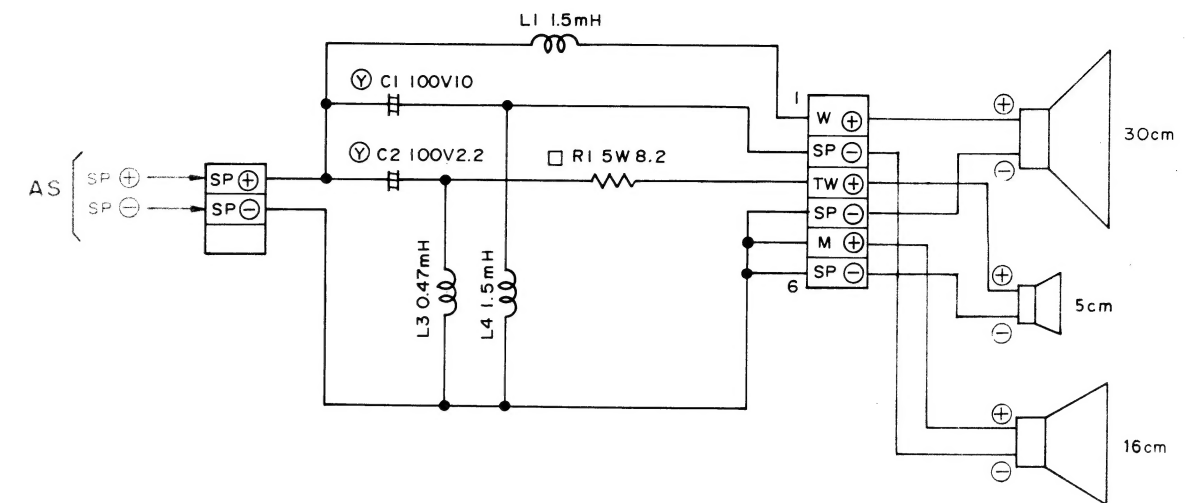
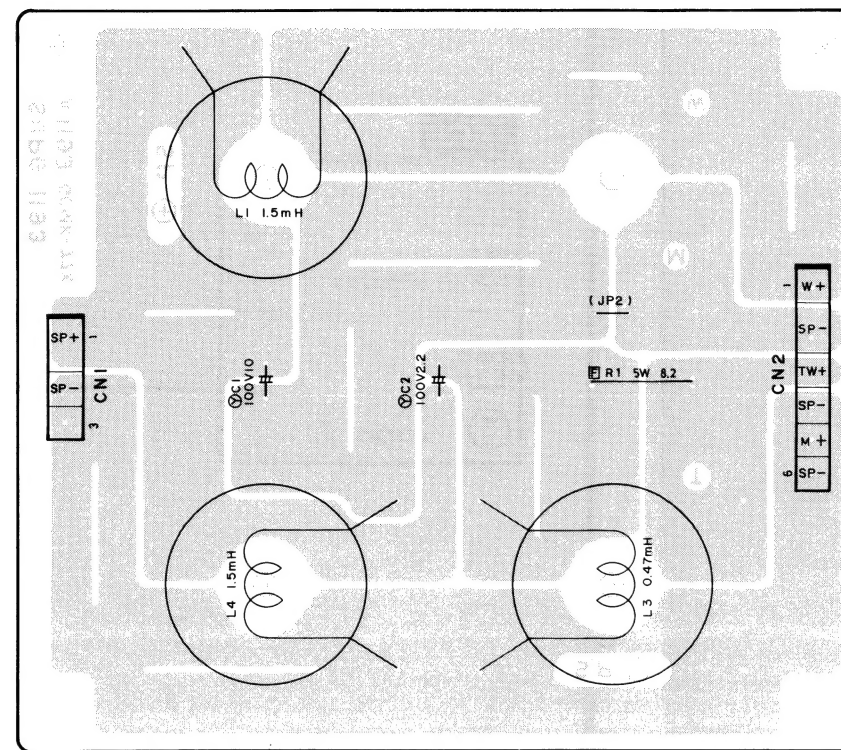


NETWORK CIRCUIT (NW)

SXPGB11931



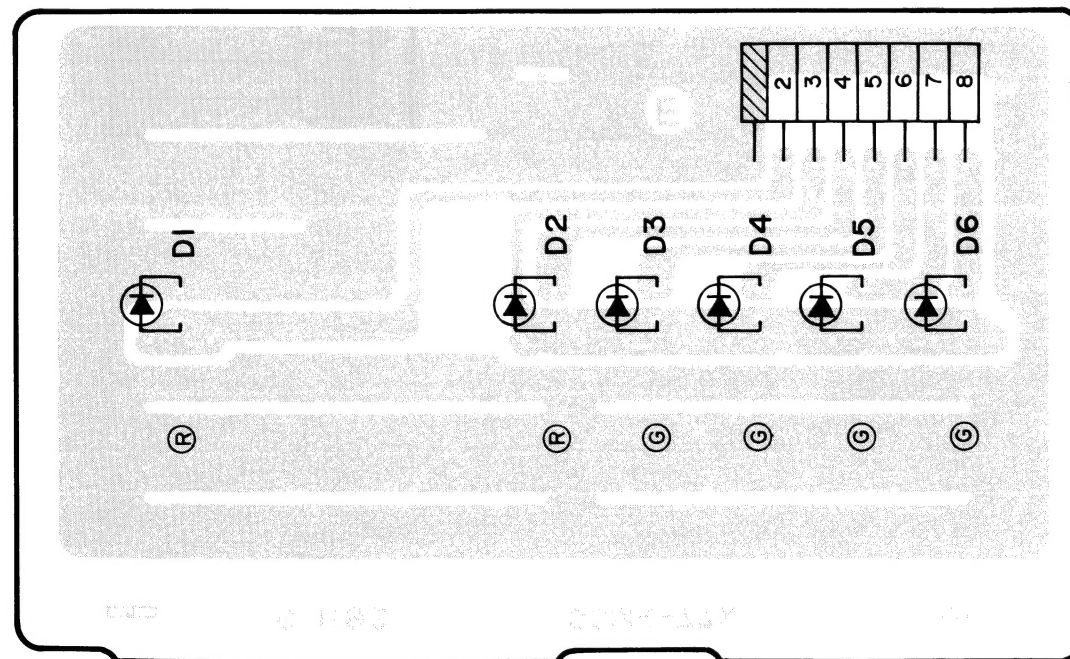
SXPGA11931



LOAD INDICATOR CIRCUIT BOARD (LI)

1931

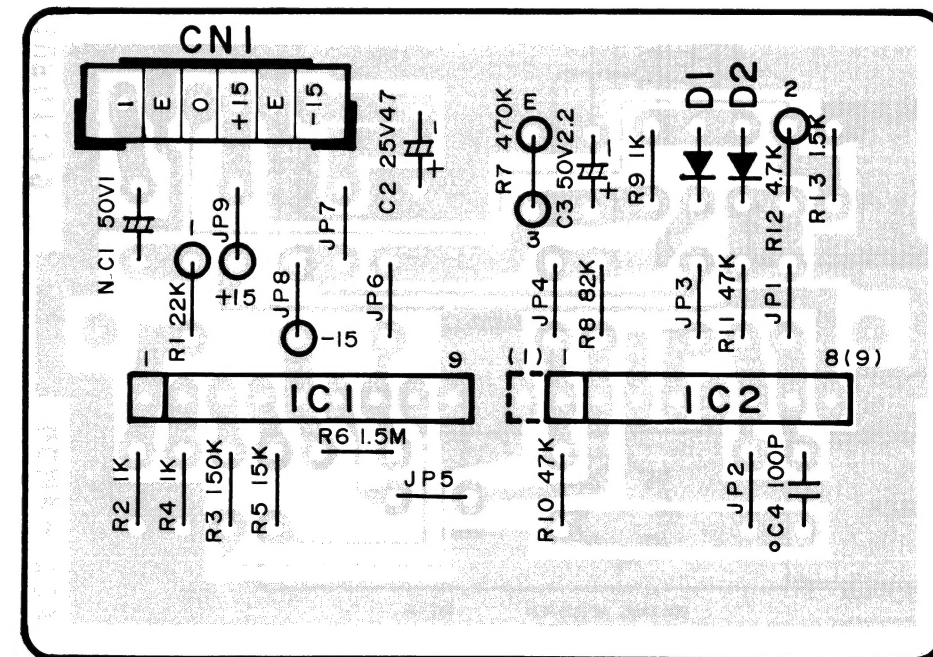
SXPGC11931



NOTES:
• DIODES
D1, 2: LN846RP
D3~6: LN346GP

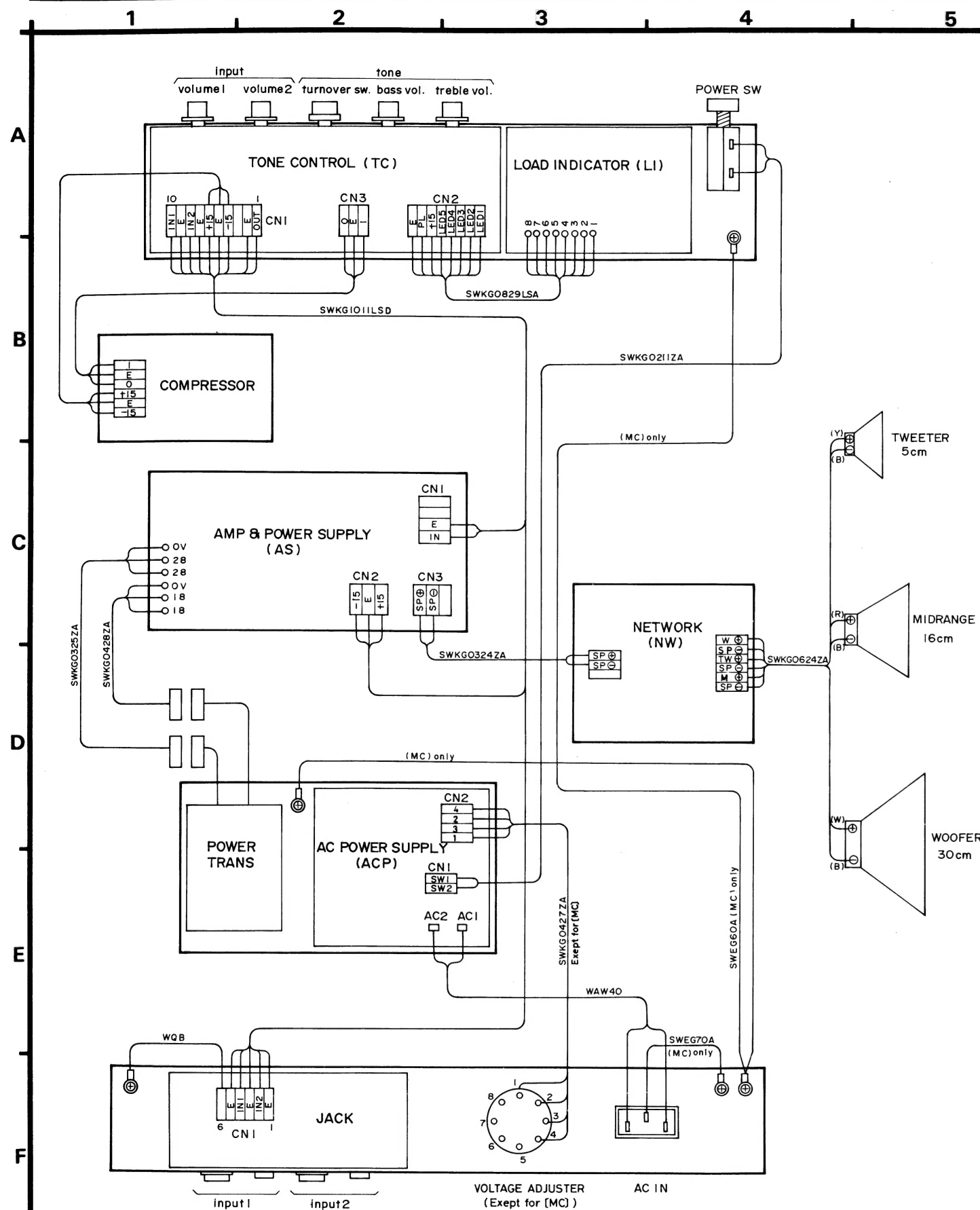
COMPRESSOR CIRCUIT BOARD (CMP)

SXPG11991



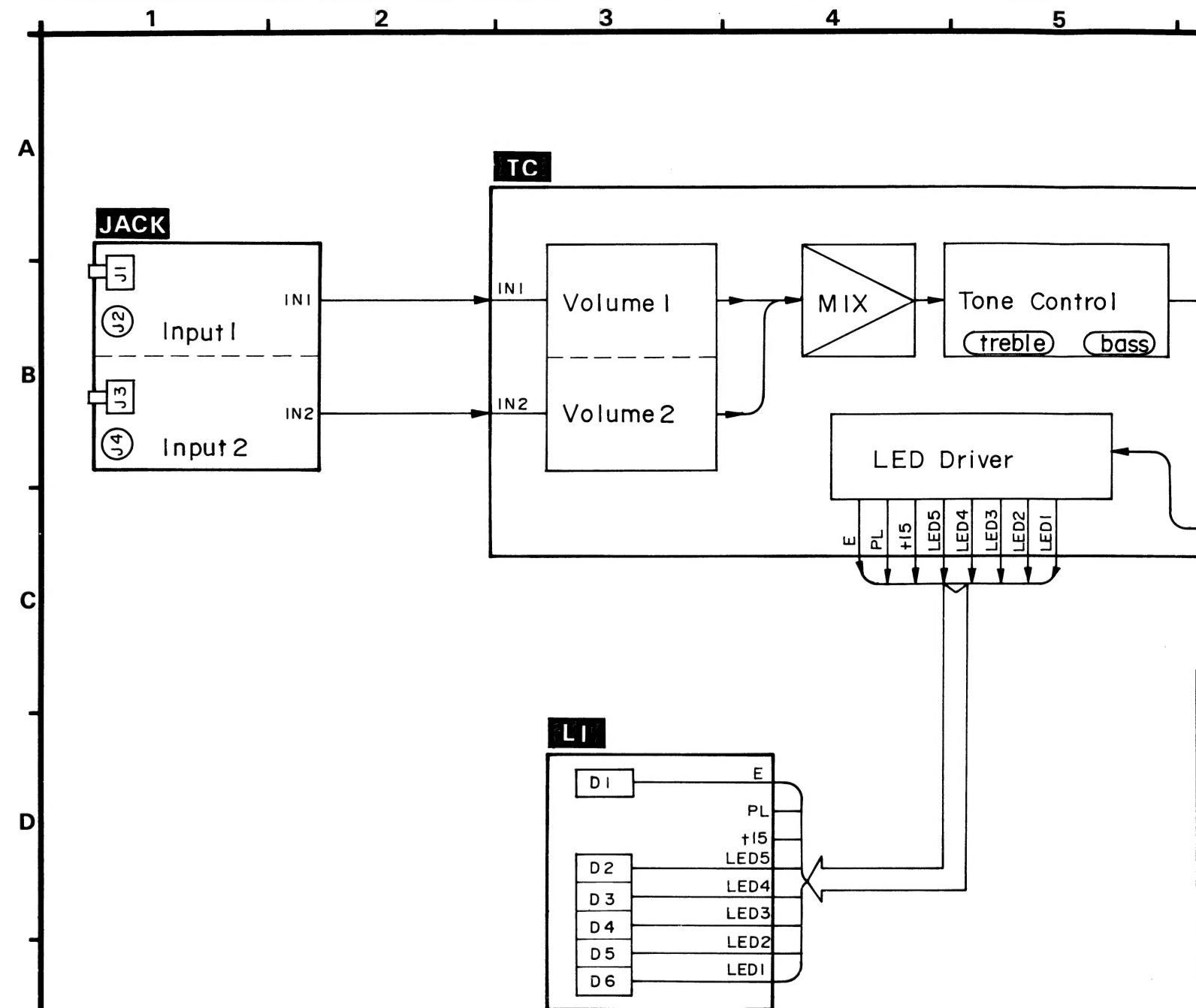
NOTES:
• IC'S
IC1: SVIGBA6110
IC2: SVIGM5218L
• DIODES
D1, 2: MA165TA5VT

WIRING CONNECTION DIAGRAM



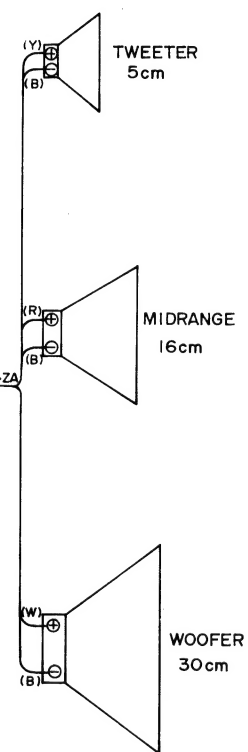
II - 1

BLOCK DIAGRAM



II - 2

BLOCK DIAGRAM



A

B

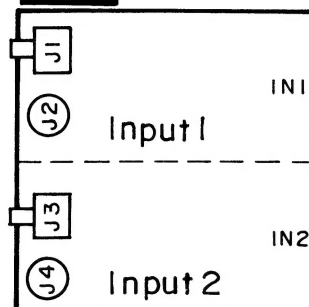
C

D

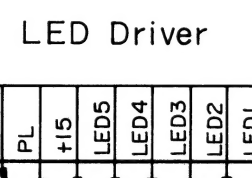
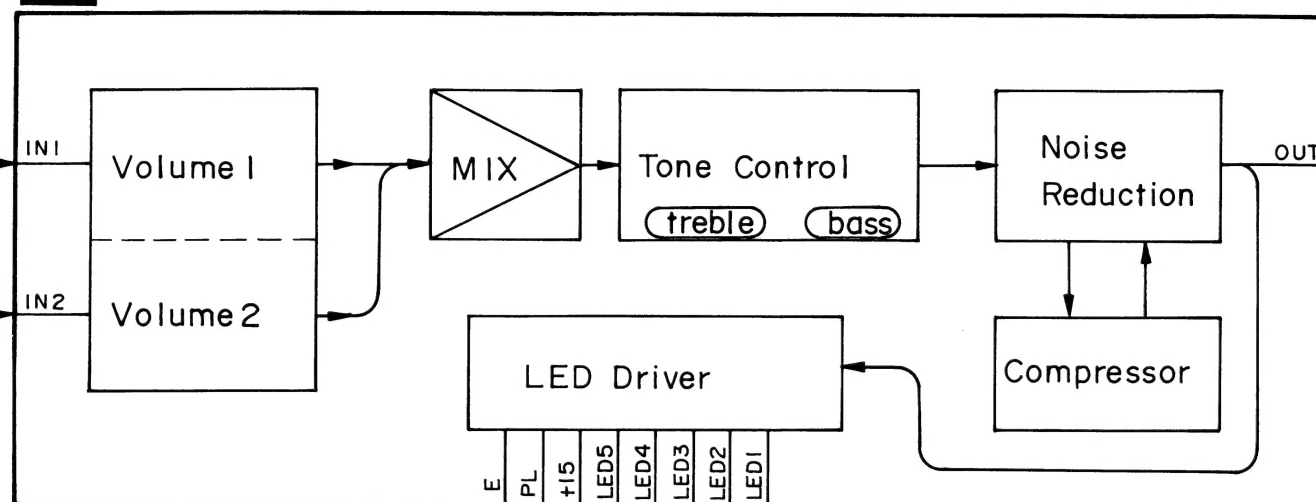
E

F

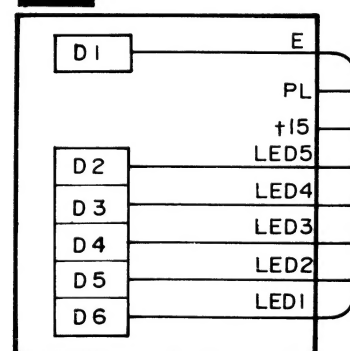
JACK



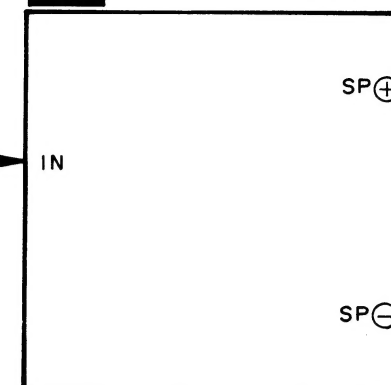
TC



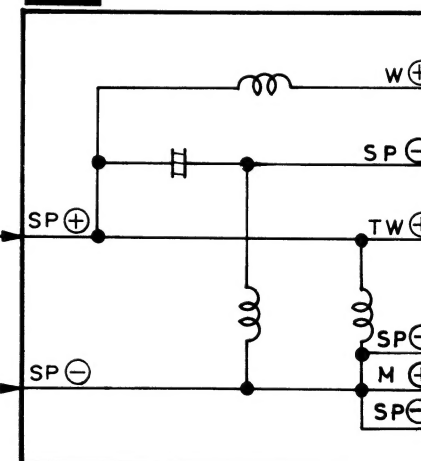
LI



AMP



NW



SPEAKER

30cm

16cm

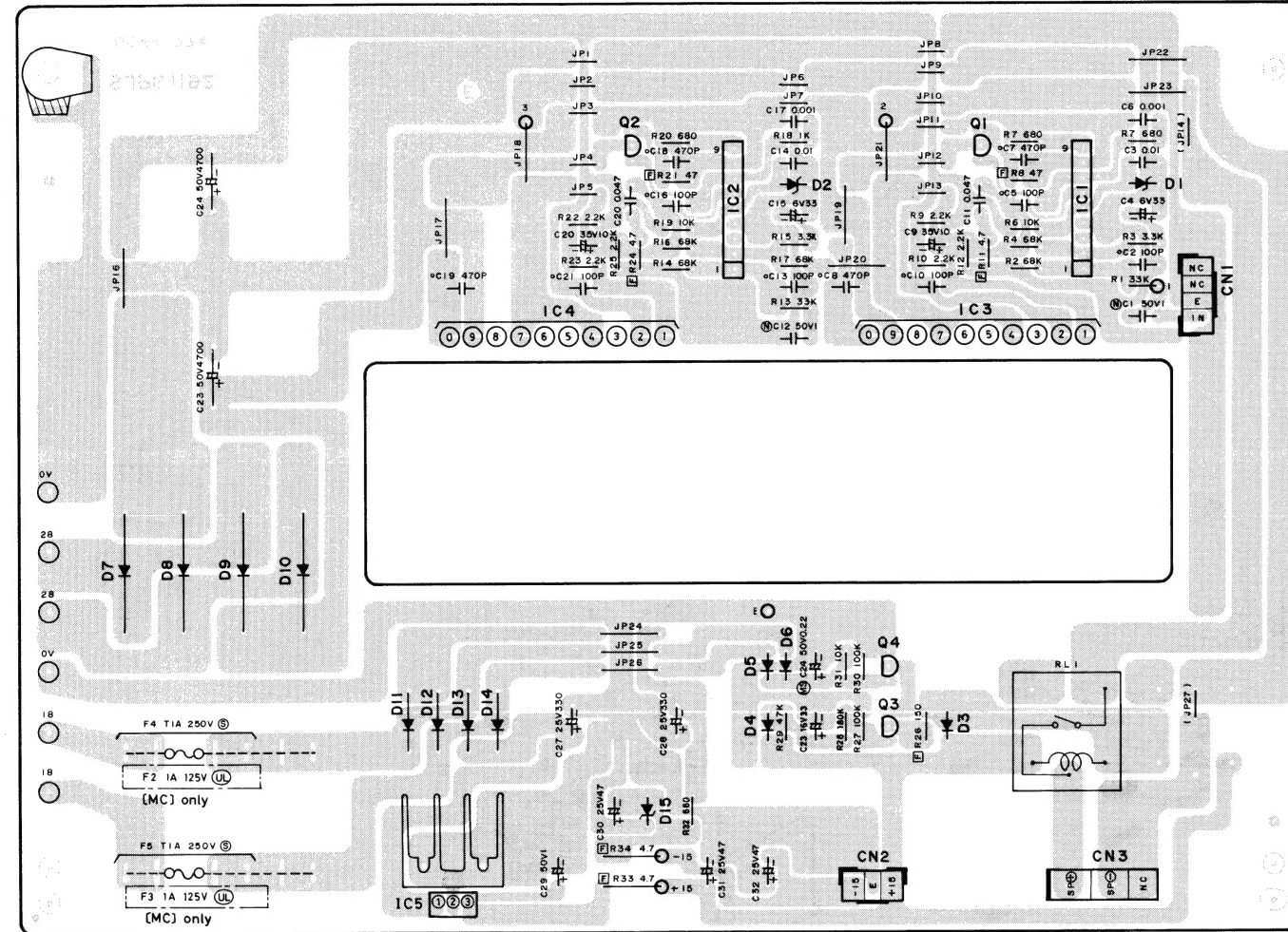
6.5cm

AMP & POWER SUPPLY CIRCUIT BOARD (AS)

SXPG11921

SXPG11922

* Products for [MC] only.



NOTES:

• IC'S

IC1, 2: AN7060
IC3, 4: SVIGS1050SL
IC5: AN7815

• TRANSISTORS

Q1, 2: 2SA1123RS
Q3: 2SD892QR
Q4: 2SC1318RS

• DIODES

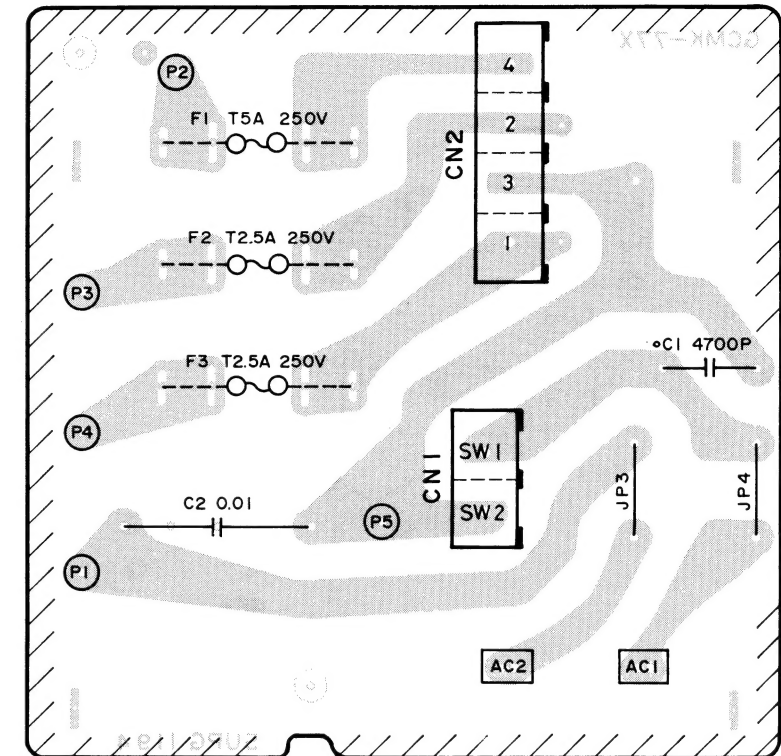
D1, 2: MA1062TR
D3~6: MA165TA5VT
D7~10: SVDS3V20
D11~14: SVDGSM1A02LF
D15: MA1150TR

• RELAY

RL1: SSYGMR3112D

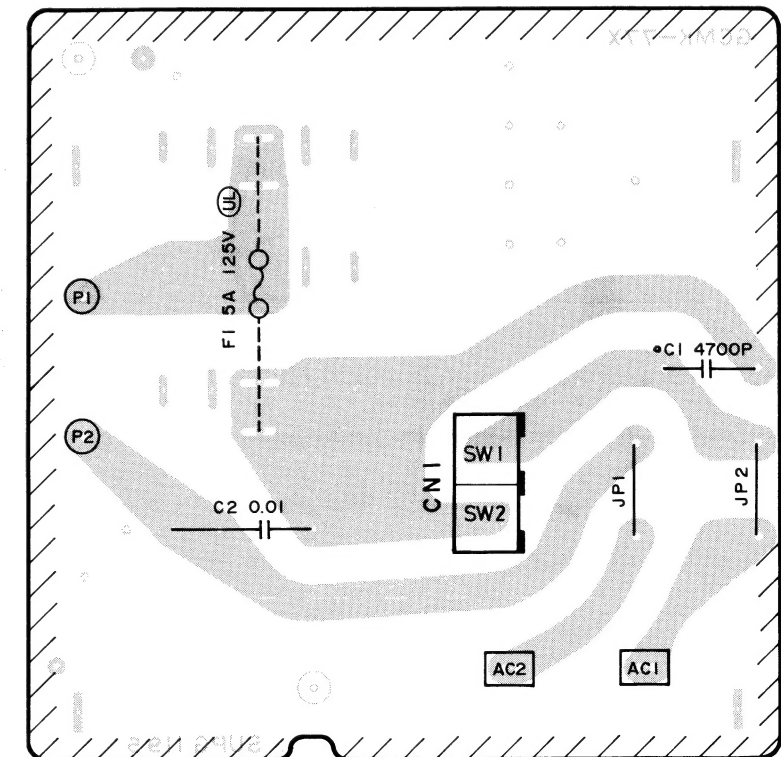
AC POWER SUPPLY CIRCUIT BOARD (ACP)

SXPG11941

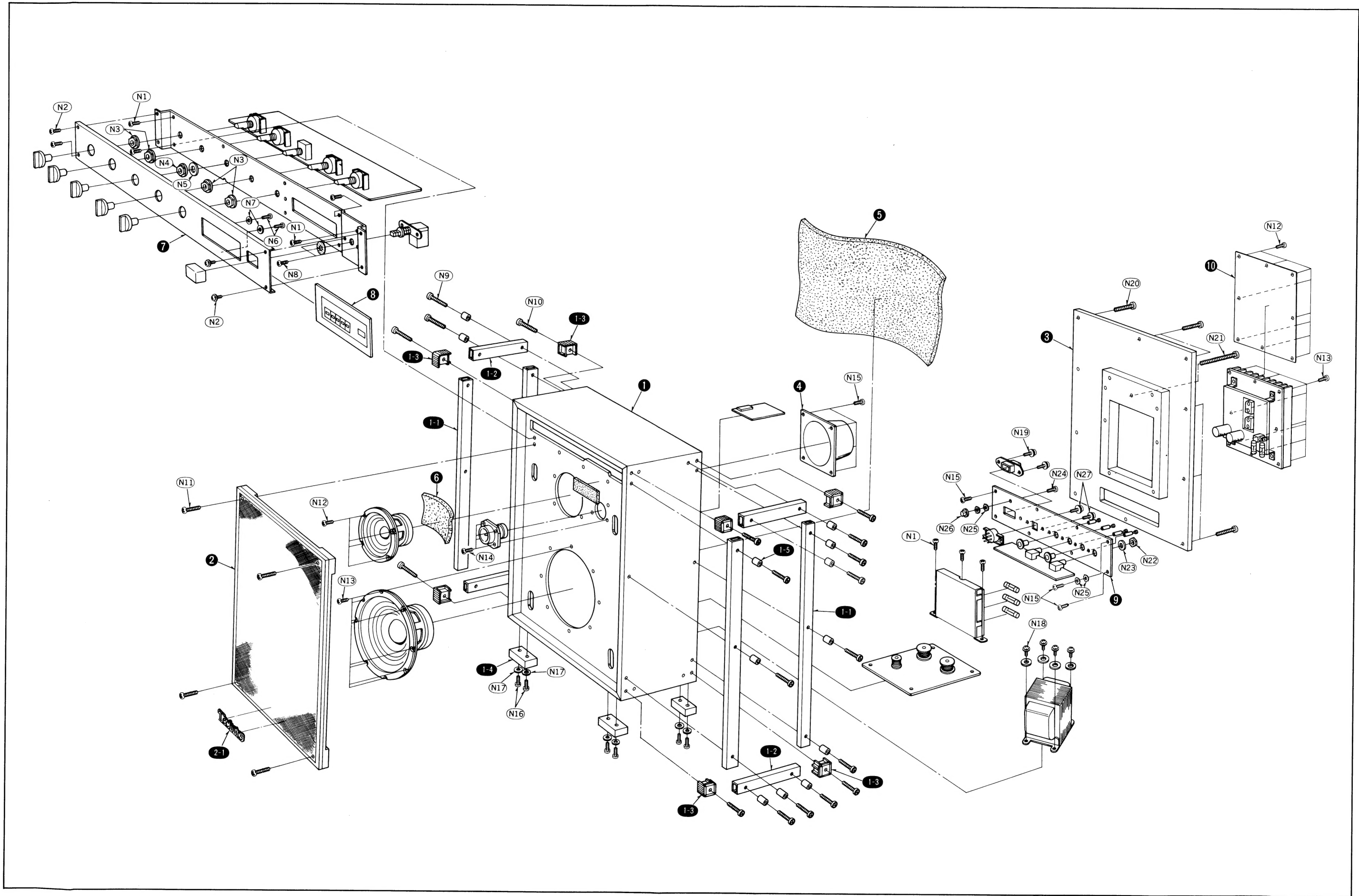


PRODUCTS FOR MC ONLY

SXPG11951



EXPLODED VIEWS OF CABINET



REPLACEMENT PARTS LIST

Notes:

- Printed circuit boards are supplied only during the period of production.
- Important safety notice
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- \circ mark are new parts.
- For part No. with area mark, check the area when placing an order.

ELECTRICAL PARTS

Part No.	Description	Per/ Set	Part No.	Description	Per/ Set
PRINTED CIRCUIT BOARDS			JACKS		
\circ SXPGA11931	Network	1	SJG30A	Input Terminal (pin jack)	2
\circ SXPGB11931	Tone Control	1	SJG150A	Input Terminal (large jack)	2
\circ SXPGC11931	Load Indicator	1			
\circ SXPGD11931	Jack	1	SJSG450A	AC Inlet	1
\circ SXPG11991	Compressor	1	SJSG460A	AC Inlet, (MC) only	1
\circ SXPG11921	Amp & Power Supply	1			
\circ SXPG11922	Amp & Power Supply, (MC) only	1	RELAYS		
\circ SXPG11941	AC Power Supply	1	SSYGM3112D		1
\circ SXPG11951	AC Power Supply, (MC) only	1			
INTEGRATED CIRCUITS			SPEAKERS		
SVIGM5218L	Operational Amplifier	TC, CMP	\circ EAS30PL117S	30cm, 8 Ω	1
SVIGLM1894N	Noise Reduction	TC	\circ EAS16PM242S	16cm, 8 Ω	1
\circ SVIGBA6124	LED Driver	TC	EAS5HH60S	5cm, 6 Ω	1
SVIGBA6110	VCA (Voltage Controlled Amplifier)	CMP			
\circ SVIGS1050SL	Power IC	AS	FUSES		
AN7815	Voltage Regulator	AS	XBA2C10TR0 Δ	1A, 250V	2
AN7060	Power Amp Driver	AS	XBA2C50TR0 Δ	5A, 250V	1
			XBA2C25TR0 Δ	2.5A, 250V	2
TRANSISTORS			XBA1F10NU14 Δ	1A, 125V	2
2SA1123R		2	\circ XBA1F50NU14 Δ	5A, 125V (MC) only	1
2SC1318S		1			
\circ 2SD892QR		1	TRANSFORMERS		
DIODES, LED'S			\circ SLTG5S8 Δ	Power Transformer	1
MA165TA5VT		6	\circ SLTG5S9 Δ	Power Transformer, (MC) only	1
MA1062	Zener	2			
MA1150		1	AC CORD, PLUG		
SVDGSM1A02LF	Rectifier	4	\circ SJAG46 Δ	AC Cord	1
SVDS3V20 Δ	Rectifier	4	\circ SJAG44 Δ	AC Cord, (MC) only	1
\circ LN846RP	LED (red)	2	\circ SJAG47 Δ	AC Cord, (EK, XS) only	1
\circ LN346GP	LED (green)	4	\circ SJAG48 Δ	AC Cord, (XL, XR) only	1
			\circ SJAG49 Δ	AC Cord, (EW) only	1
COILS			\circ SJP5213-1 Δ	Attachment plug, (X, XX, XV, XT) only	1
\circ SLCSC471KU	0.47mH Coil (Network)	1			
\circ SLCSC152KU	1.5mH Coil (Network)	2	WIRING PARTS		
SWITCHES			\circ SWKG1011LSD	Connector, with Wire	1
ESB70291S Δ	Power Switch	1	\circ SWKG0324ZA	Connector, with Wire	1
ESB70454T Δ	Power Switch, (MC) only	1	\circ SWKG0624ZA	Connector, with Wire	1
\circ SSRG50A	Turnover Switch	1	\circ SWKG0325ZA	Connector, with Wire	1
ESE37209 Δ	Voltage Adjuster	1	\circ SWKG0428ZA	Connector, with Wire	1
			\circ SWKG0211ZA	Connector, with Wire	1
VARIABLE RESISTORS			\circ WAW40	Wire	2
EVA3225C15G	100K Ω C, bass, treble	2	\circ SWKG0427ZA	Connector, with Wire, Except for, (MC)	1
\circ EVA0382554G	50K Ω A, volume 1, volume 2	2	\circ SWEG60A	Wire, with Earth Terminal, (MC) only	1
			\circ SWEG70A	Wire, with Earth Terminal, (MC) only	1

■ Numbering System of Resistor

Resistor Type	Wattage	Tolerance
ERD : Carbon	S2 : 1/4W	J : ±5%
ERD—F : Carbon Flame-Proof	2 : 1/4W 25 : 1/4W	K : ±10%
ERF : Wire Wound	5 : 5W	

Example

ERD	S2	T	J	101
Type	Wattage	Shape	Tolerance	Value
ERD	2	F	C	101
Type	Wattage	Flame Proof	Fuse Type	Tolerance Value
ERF	5	ZX	K	8R2
Type	Wattage	Shape	Tolerance	Value

■ Numbering System of Capacitor

Capacitor Type	Symbol Mark	Voltage		Tolerance
		ECEA Type	Others	
ECEA : Electrolytic		0J : 6.3V	1H : 50V DC	ECEA Type : ±20%
ECEA—N : Non-Polar Electrolytic	(N)	1C : 16V		J : ±5%
ECEA—Y : Non-Polar Electrolytic	(Y)	1E : 25V		K : ±10%
ECEA—M : Electrolytic, MSR Series	(MS)	1V : 35V		M : ±20%
ECEA—Z : Electrolytic, Z Series	(Z)	1H : 50V		
ECQV : TF Capacitor	(TF)	100Y : 100V		
ECC : Ceramic	○	50M : 50V		
ECK : Ceramic	○	50Z : 50V		
ECQM : Polyester				

Example	ECEA	0J	U	330
Type	Voltage	Peculiarity use	Value	
ECEA	50	M (Z)	R47	R
Type	Voltage	Peculiarity use	Value	Special u
ECQV (M)	1H	102	J	
Type	Voltage	Value	Tolerance	
ECC (K)	R	1H	220	J
Type	Shape	Voltage	Value	Tolerance

Part No.	Description	Per/ Set	Part No.	Description	Per/ Set
RESISTORS			CAPACITORS		
ERDS2TJ221	220Ω	1	ECEA0JU330	6.3V, 33μF	2
ERDS2TJ471	470Ω	5	ECEA1CU330	16V, 33μF	1
ERDS2TJ681	680Ω	3	ECEA1CU100	16V, 10μF	2
ERDS2TJ821	820Ω	1	ECEA1EU470	25V, 47μF	6
ERDS2TJ102	1KΩ	7	ECEA1EU331	25V, 330μF	2
ERDS2TJ152	1.5KΩ	2	ECEA1VU100	35V, 10μF	2
ERDS2TJ222	2.2KΩ	6	ECEA1HU010	50V, 1μF	3
ERDS2TJ332	3.3KΩ	3	ECEA1HU2R2	50V, 2.2μF	1
ERDS2TJ472	4.7KΩ	2	ECET50R472SW	50V, 4700μF	2
ERDS2TJ822	8.2KΩ	1	ECEA1CN100S	(N) 16V, 10μF	1
ERDS2TJ103	10KΩ	4	ECEA1HN010S	(N) 50V, 1μF	8
ERDS2TJ153	15KΩ	2	ECEA100Y2R2	(Y) 100V, 2.2μF	1
ERDS2TJ223	22KΩ	1	ECEA100Y10	(Y) 100V, 1μF	1
ERDS2TJ333	33KΩ	2	ECEA50ZR1	(Z) 50V, 0.1μF	1
ERDS2TJ473	47KΩ	6	ECEA50MR22R	(MS) 50V, 0.22μF	1
ERDS2TJ563	56KΩ	1	ECQM1H102KV	0.001μF	3
ERDS2TJ683	68KΩ	6	ECQM1H332KV	0.0033μF	1
ERDS2TJ823	82KΩ	5	ECQM1H472KV	0.0047μF	2
ERDS2TJ104	100KΩ	3	ECQM1H103KV	0.01μF	2
ERDS2TJ154	150KΩ	1	ECQM1H223KV	0.022μF	2
ERDS2TJ184	180KΩ	1	ECQM1H333KV	0.033μF	1
ERDS2TJ474	470KΩ	1	ECQM1H473KV	0.047μF	3
ERDS2TJ105	1MΩ	4	ECQM1H683KV	0.068μF	1
ERDS2TJ155	1.5MΩ	1	ECQM1H104KV	0.1μF	2
△ ERD2FCJ4R7	(F) 1/4W 4.7Ω, Fuse Type	2	ECQV1H154JZ	(TF) 0.15μF	1
△ ERD25FVJ4R7	(F) 1/4W 4.7Ω	2	ECQV1H224JZ	(TF) 0.22μF	1
△ ERD25FVJ151	(F) 1/4W 150Ω	1	ECCR1H101J5	○ 100PF	8
△ ERD25FVJ470	(F) 1/4W 47Ω	2	ECCR1H471J5	○ 470PF	4
△ ERF5ZXK8R2	(F) 5W 8.2Ω	1	ECKR1E473ZV	○ 0.047μF	1
			△ ECKCVA1472MF	○ 4700PF, Line Capacitor	1
			△ ECQU1A103MH	0.01μF, 125V, Across the Line Capacitor (MC)	1
			△ ECQU2A103MF	0.01μF, 250V, Across the Line Capacitor	1

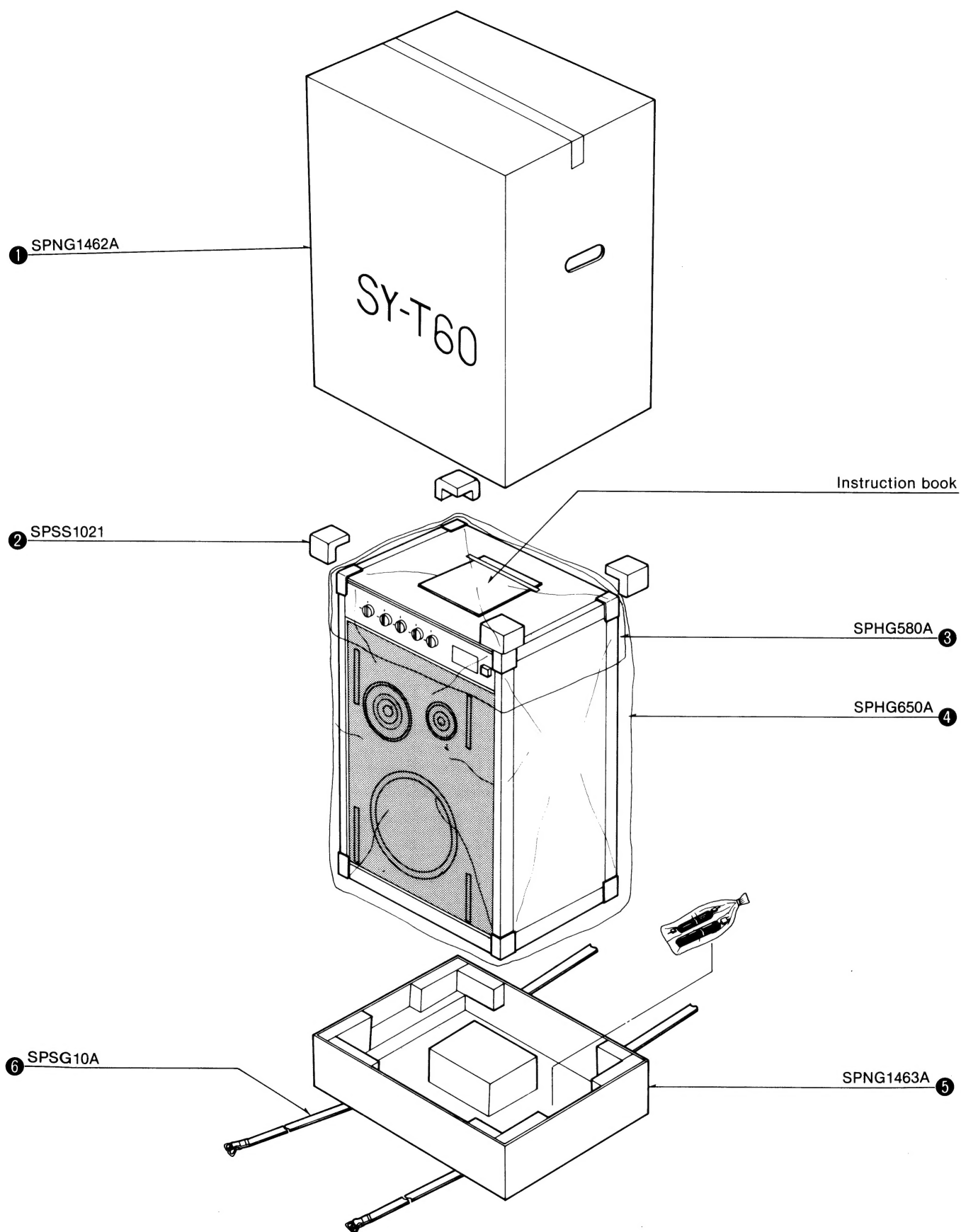
MECHANICAL PARTS

Ref. No.	Part No.	Description	Per/ Set
CABINET			
○ 1	SKMG880AS	Cabinet	1
○ MC	SKMG890AS	Cabinet	1
○ 1-1	SGXG1220A	Ornament Pipe	4
○ 1-2	SGXG1221A	Ornament Pipe	4
○ 1-3	SHRG7260A	Corner Cushion	8
○ 1-4	SHRG2110A	Foot	4
○ 1-5	SUDG0070A	Spacer	20
○ 2	SKZG4350A	Speaker Gurille Assembly	1
○ 2-1	SGBG60A	Technics Badge	1
○ 3	SKFG1090A	Rear Board Assembly	1
○ 4	SUVS5-1	Speaker Cover	1
○ 5	SHSG9150A	Sound Absorbing Material	1
○ 6	SHSG9160A	Sound Absorbing Material	1
○ 7	SGWG1400A	Control Panel	1
○ 8	SGKG2080A	Load Indicator Display Panel	1
○ 9	SMKG1680A	Jack Panel	1
○	SMKG1682A	Jack Panel, (MC) only	1
○ 10	SGMG70A	Rear Net	1
ACCESSORIES			
○	SQLG10A	Caster Assembly	1
○	SJEG10A	Pin Cord (white)	1
○	SJEG20A	Pin Cord (red)	1
SCREWS and WASHERS			
N1	XTB35 + 12A	Screw	
N2	XTW3 + 8CFZ	Screw	
N3	SNES4004	Nut	
N4	XNS7	Nut	
N5	XWV8	Washer	
N6	XTW3 + 8J	Screw	
N7	XWA4B	Washer	
N8	XSN3 + 6S	Screw	
N9	SNZS9003-2FJ	Screw	
N10	SNES9003-2FG	Screw	
N11	SNEG580A	Screw	
N12	XTB4 + 12AFZ	Screw	
N13	XTB4 + 20AFZ	Screw	
N14	XTB35 + 20AFZ	Screw	
N15	XTB4 + 12A	Screw	
N16	XTB5 + 20A	Screw	
N17	XWG5G16	Washer	
N18	XYN5 + F35S	Screw with Washers	
N19	XTB3 + 8BFZ	Screw	
N20	XTC4 + 30FZ	Screw	
N21	XTS4 + 70AFZ	Screw	
N22	XNS12FZ	Nut	
N23	SNEG770A	Washer	
N24	XTN4 + 10FFZ	Screw	
N25	XWC4BFN	Washer	
N26	SNE499-1	Nut	
N27	XYN3 + F10FZS	Screw with Washers	
KNOB, BUTTON			
	SBNS9	Volume 1 • 2, turnover, bass, treble	5
	SBCG20I	Power Switch	1
INSTRUCTION BOOK			
○	SQFG1330		1

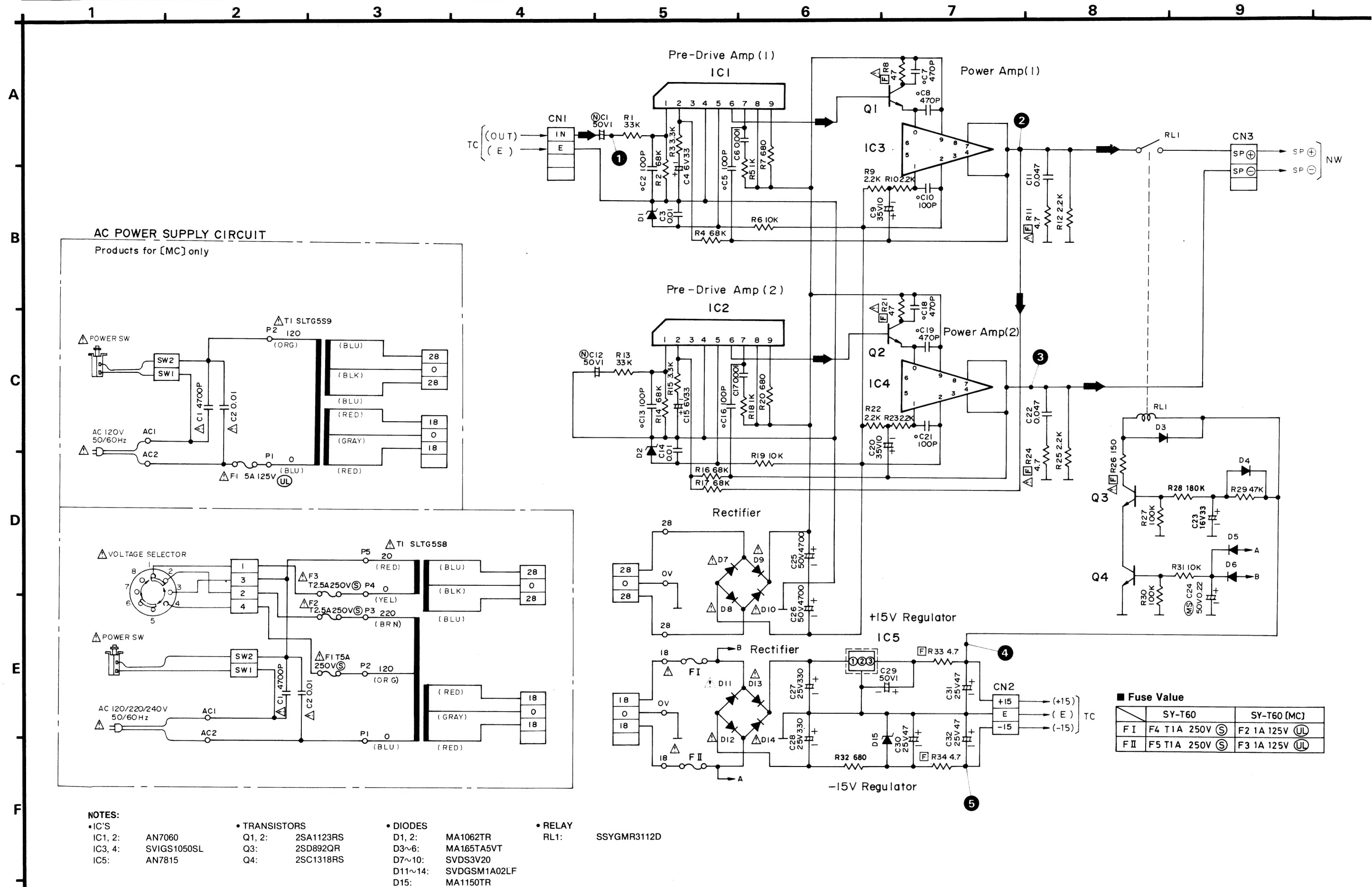
PACKING PARTS

Ref. No.	Part No.	Description	Per/ Set
○ 1	SPNGT60EA	Packing Parts Assembly	1
○ 2	SPNG1462A	Carton Box	(1)
○ 3	SPSS1021	Pad	(4)
○ 4	SPHG580A	Protection Cover	(1)
○ 5	SPHG650A	Polyethylene Bag	(1)
○ 6	SPNG1463A	Bottom Case	(1)
	SPSG10A	Band	(2)

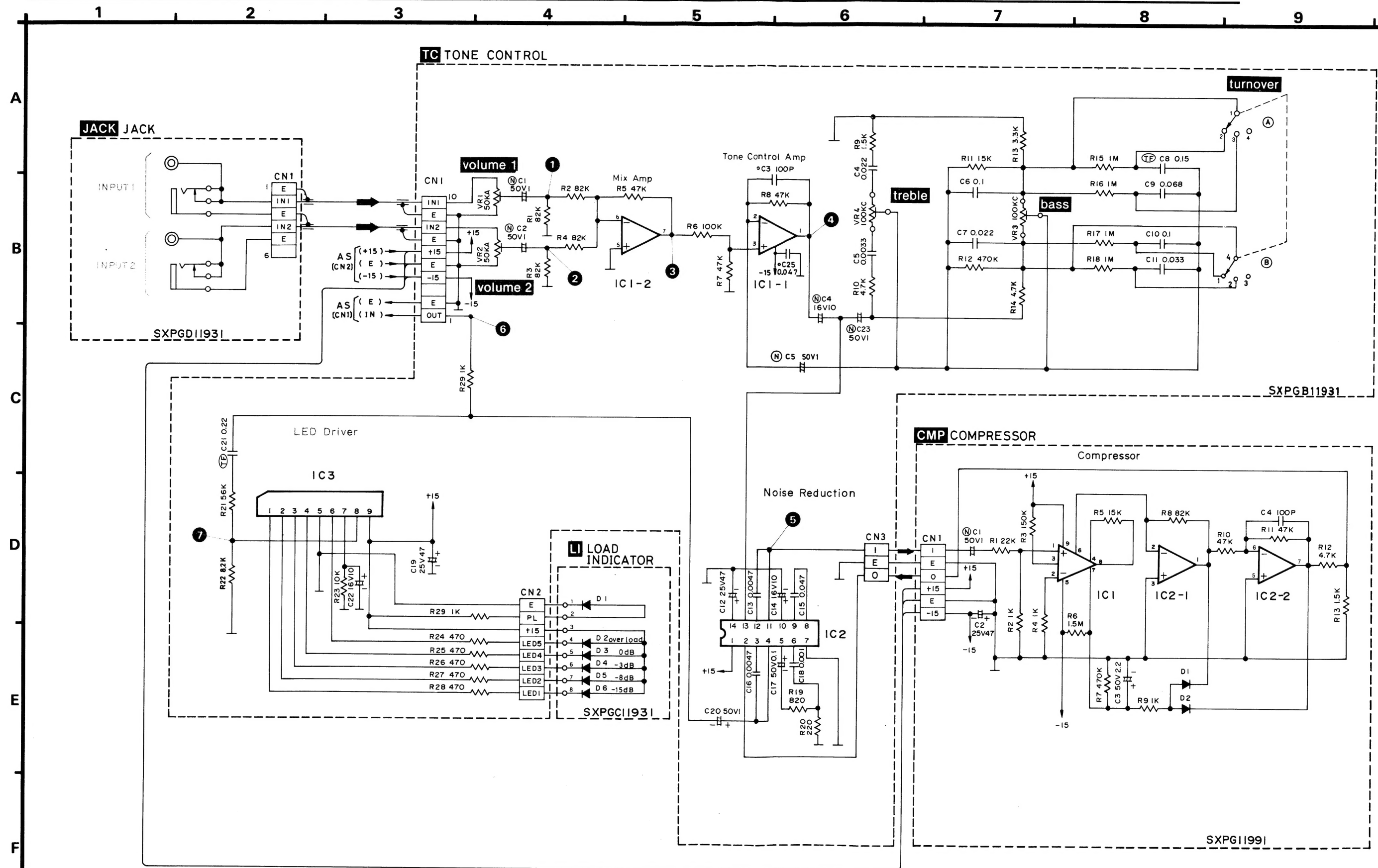
PACKING



AMP & POWER SUPPLY CIRCUIT DIAGRAM (AS)



TONE CONTROL (TC), JACK (JACK), LOAD INDICATOR (LI), COMPRESSOR (CMP) CIRCUIT DIAGRAM



NOTES:

TC

• IC'S
IC1: SVIGM5218L
IC2: SVIGLM1894N
IC3: SVIGBA6124

LI

• DIODES
D1, 2: LN846RP
D3~6: LN346GP

CMP

• IC'S
IC1: SVIGBA6110
IC2: SVIGM5218L
• DIODES
D1, 2: MA165TA5VT